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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,360	01/08/2004	Alice Madrone Dalrymple	212/543	7626

7590 12/30/2005
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Suite 400
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EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,360

Applicant(s)

DALRYMPLE ET AL.

Examiner

Sylvia R. MacArthur

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 7-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/8/2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, drawn to a polishing apparatus, classified in class 156, subclass 345.13.
 - II. Claims 7-16, drawn to a polishing method, classified in class 216, subclass 53.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the method could be performed by a materially different apparatus, one without an optical sensor in the pad.

3. During a telephone conversation with David Crockett on 12/20/2005 a provisional election was made with traverse to prosecute the invention of the apparatus, claims 1-6.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the

Art Unit: 1763

application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,2, 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbour (US 6,884,150) in view of Swedek et al (6,190,234).

Barbour teaches an endpoint detection apparatus featuring a polishing pad 3 with built-in optical sensor 45. The sensor 25 comprises a light source 35, a light detector 36, and an optical puck 46, a conductor ribbon 11 (means for conveying power).

Wolf fails to teach a processor as discussed in claim 1 of the present invention.

Swedek teaches an endpoint detection apparatus wherein the light source, detectors and sensor are connected to a processor, see col. 7 lines 1-15. The processor is programmed to measure the sinusoidal curve indicative of the intensity of detected light over time and wherein the processor is further programmed to measure the wavelength of the sinusoidal curve see col. 7 lines 1-15 and col.8 lines 38-45.

The motivation to provide the apparatus of Barbour with the processor of Swedek is that it provides an in-situ means of endpoint determination coupled with process control.

Thus, it would have been obvious for one of ordinary skill in the art to modify the teachings of Barbour to include a processor with endpoint determination and process control capabilities.

Claims 3 and 6: See Fig.2 of Barbour

Art Unit: 1763

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barbour in view of Johansson et al (US 2005/0101224).

The teachings of Barbour were discussed above.

Barbour fails to teach a processor.

Johansson et al teaches a CMP apparatus provided with a computer 90 that is programmed to correlate eddy current monitoring with film thickness measurements. See section [0042].

Regarding claim 5: The processing modifying the rate of polishing see section [0056] of Johansson et al.

The motivation to provide the apparatus of Barbour with the processor and algorithms of Johansson et al is that it provides in-situ monitoring and process controller of the polisher.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to combine the teachings of Barbour and Johansson et al.

Conclusion

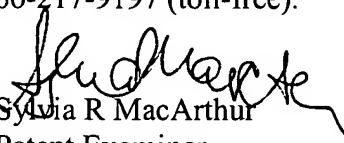
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438.

The examiner can normally be reached on M-F during the core hours of 9 a.m. and 3 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1763

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

December 27, 2005